Cancel Att C1 wherein said hood portion is disposed at a position above said radiation fin so as to cover the radiation fin.

REMARKS

An Office Action was mailed on October 24, 2002. Claims 1 – 23 are pending in the present application. With this response, Applicants amend the specification, cancel claims 1 and 2 without prejudice or disclaimer, and amend claims 3, 8, 9, 17 and 18. No new matter is introduced.

OBJECTION TO DRAWING

FIG. 3 is objected to for failing to show opening 525 as described on page 8 of the specification. Applicants amend the specification to identify this element as opening 523 (which is shown in FIG. 3), and respectfully request that this objection be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 112

Claims 1 – 9 and 17 – 23 are rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as their invention. Applicants cancel claims 1 and 2 without prejudice or disclaimer, incorporate the language of canceled claim 1 in amended claim 3, and include in claim 3 the language suggested by the Examiner for original claim 1 at lines 6 and 9. Applicants amend claim 8 to distinguish claim 8 from claim 3 (support for this amendment may be found, for example, with reference to Applicants' FIG. 6).

Applicants amend claim 17 to clearly recite the elements of the circuit substrate of claim 10. Claim 17 is intended to claim a piece of electronic equipment that includes a

A

circuit substrate having the limitations of claim 10 (for example, as illustrated by the entertainment apparatus 110 of FIG. 1). Claim 18 is amended to depend from claim 17.

Applicants respectfully submit that these amendments are responsive to the rejection under 35 U.S.C. § 112, and request that this objection be withdrawn

REJECTIONS UNDER 35 U.S.C. §§ 102, 103

Claims 1, 2, 9, 10, 11, and 16 - 18 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,400,566 to Ootori and by U.S. Patent No. 6,205,027 to Nakajima. Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ootori. Claims 1,2, 9 – 11 and 17 are rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,411,522 to Frank et al. Applicants cancel claims 1 and 2 without prejudice or disclaimer, and amend claim 3 to include the limitations of canceled claim 1.

In independent claim 3, Applicants claim a circuit substrate unit for mounting a circuit element that comprises a plurality of substrates each mounting a circuit element and at least one heat sink member, wherein at least one circuit substrate is stacked on an adjacent circuit substrate and a heat sink member is arranged in a space formed between adjacent substrates. The heat sink member is arranges so that one of a plurality of protruding portions contacts a circuit element on a surface of a circuit substrate facing the protruding portions. Independent claims 10 and 17 disclose circuit substrate unit comprising first and second circuit substrates, a heat sink member and an electromagnetic shield member, wherein the heat sink member and the electromagnetic substrate member are sandwiched between the first and second circuit substrates.

Ootori discloses an electronic device with heat generating and heat absorbing parts, including a substrate unit 13 for mounting a circuit element 51 and at least one heat

sink member 52, wherein heat sink member 52 is arranged between adjacent substrate units 13, 31. Unlike Applicants' invention of claim 3, the device of Ootori does not disclose a device in which a first circuit substrate is stacked on a second circuit substrate. Unlike the invention of Applicants' claims 10 and 17, Ootori fails to disclose a unit in which first and second circuit substrates sandwich a heat sink member and an electromagnetic shield member.

Nakajima discloses a structure and method for mounting a circuit module. Unlike the invention of Applicants' claim 3, Nakajima fails to disclose a heat conduction member disposed between adjacent circuit boards and in contact with a circuit element mounted on a circuit substrate. Unlike the invention of Applicants' claims 10 and 17, Nakajima fails to disclose an electromagnetic shield member sandwiched with a heat sink member between first and second circuit substrates. Applicants respectfully disagree with the Examiner's characterization of Nakajima's CPU holder 26 as an electromagnetic shield, as holder 26 comprises a series of lateral rails for which Nakajima's specification makes no claim to electromagnetic shielding.

Frank discloses an integrated computer module with an EMI shielding plate 140. Unlike Applicants' claimed invention of claims 3, 10 and 17, Frank fails to disclose a heat sink member disposed between adjacent circuit boards. The Examiner suggests the heat sink member may be equated to tabs 141, 143 of shielding plate 140. Tabs 141, 143 however function to position plate 140 in the module, and do not come into contact with a circuit element or otherwise operate to function as heat sinks.

Accordingly, Applicants respectfully submit that independent claims 3, 10 and 17 are anticipated by none of Ootori, Nakajima and Frank, and are therefore allowable. As claims 4 – 9, 11 – 16 and 18 – 23 respectively depend from allowable claims 3, 10 and

17, Applicants respectfully submit that claims 4 – 9, 11 – 16 and 18 – 23 are also allowable for at least this reason. In addition, Applicants respectfully submit that that the hood portion of claim 18 is disclosed by none of Ootori, Nakajima and Frank, and is also allowable for this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 3 - 23, consisting of independent claims 3, 10 and 17 and the claims that depend therefrom, stand in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Attached is a marked up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned **"Version With Marks To Show Changes Made"**.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,

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Version with Markings to Show Changes Made – S/N 10.037,481

IN THE SPECIFICATION

Please amend the paragraph beginning at page 8, line 8 as follows:

A notch portion 143a is provided in the back surface portion 141 of the central chassis 140 as shown in Fig. 3. The switch inlet unit 304 is exposed to the outside from this notch portion 143a. An exhaustion port 143b is provided at a location where the back surface portion 141 faces the cooling fan 305. Besides, various communications terminals 521 and 522 are provided in a lower back surface member 144 as shown in Fig. 3. An opening portion [525] 523 for serving as an insertion port for a removable external storage device is provided in the back surface portion 141. The opening portion [525] 523 is covered with a cover (not shown) in regular use.

IN THE CLAIMS

Please cancel claims 1 and 2 without prejudice or disclaimer.

Please amend claims 3, 8, 9, 17 and 18 as follows:

3. (Amended) A circuit substrate unit for mounting a circuit element, which comprises:

a plurality of circuit substrates, each of which mounts a circuit element thereon; and

at least one heat sink member,

wherein at least one of said plurality of circuit substrates is stacked on one of the circuit substrates adjacent thereto with a space therebetween, and

said heat sink member is arranged in the space formed between said adjacent circuit substrates.

[The circuit substrate according to claim 2,]

wherein said heat sink member has a plurality of protruding portions on at least one of [planes] plane facing one of the two circuit substrates which sandwich said heat sink member therebetween, and

[the] a circuit element arranged on said plane which faces said heat sink member is mounted on the circuit substrate in a state where the circuit element contacts with at least one of said plurality of protruding portions.

8. (Amended) The circuit unit according to claim 3,

wherein [at least one] others of said plurality of protruding portions are arranged to make no contact with [a] the circuit element mounted on [a] the circuit substrate facing the protruding portions.

9. (Amended) The circuit substrate unit according to claim [1] 3,

wherein said heat sink member has a radiation fin partially provided therein.

17. (Amended) Electronic equipment comprising [the] a circuit substrate unit [according to claim 10] having:

a first circuit substrate;

a second circuit substrate;

a heat sink member; and

an electronic shield member;

wherein said first circuit substrate and said second circuit substrate sandwich said heat sink member and said electromagnetic shield member therebetween.

18. (Amended) Electronic equipment comprising the circuit substrate unit according to claim [11] 17, said circuit substrate unit further comprising:

a circuit element on said first circuit substrate serving as a first heat source,

a circuit element on said first circuit substrate serving as a second heat source,

a radiation fin on a plane of said heat sink member facing the second circuit substrate,

a plurality of protruding portions on the plane of said heat sink member facing the second circuit substrate, and

a hood portion,

wherein said hood portion is disposed at a position above said radiation fin so as to cover the radiation fin.